

REMARKS

The Office Action dated October 3, 2005, has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

Claims 1-6 are currently pending in the application, of which claims 1 and 4 are independent. Claims 1-6 are respectfully submitted for consideration.

Claims 1 and 4 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,123,884 of Kondoh et al. ("Kondoh") in view of WO 2003025104 of Morita ("Morita I") which the Office Action states corresponds to U.S. Patent Application Publication No. 2004/0171500 of Morita ("Morita II"). The Office Action states that Kondoh teaches all the elements of the claims, except "filling the space formed between the externally toothed gears and the internally toothed gear with a grease which contains at least a base oil having a kinetic viscosity being not less than 10 mm²/s at 100 degrees C and a lithium complex thickener synthesized from adipic acid." The Office Action supplies Morita I to remedy the deficiencies of Kondoh. Applicant respectfully traverses this rejection.

Claim 1, upon which claims 2-3 depend, is directed to an oscillating internal-meshing planetary gear system including an external gear and an internal gear of which the number of teeth is slightly different from said external gear. The oscillating rotation of either said external gear or said internal gear relative to the mating gear reduces a input shaft rotation and an output reduced speed is taken off from a output shaft. Either said

external gear or said internal gear has trochoidal tooth profile and the mating gear has circular-arc tooth profile. A space formed between said external gear and said internal gear is filled up with a grease which contains at least a base oil having kinetic viscosity being not less than $10 \text{ mm}^2/\text{s}$ at 100°C and a lithium complex thickener synthesized from adipic acid.

Claim 4, upon which claims 5-6 depend, is directed to a method for improving the durability of a oscillating internal-meshing planetary gear system. The system includes an external gear and an internal gear of which the number of teeth is slightly different from said external gear, either said external gear or said internal gear having trochoidal tooth profile and the mating gear having circular-arc tooth profile, the oscillating rotation of either said external gear or said internal gear relative to the mating gear reducing a input shaft rotation and a output reduced speed being taken off from a output shaft. The method includes the step of filling up a space formed between said external gear and said internal gear with a grease containing at least a base oil having kinetic viscosity not less than $10 \text{ mm}^2/\text{s}$ at 100°C and lithium complex thickener synthesized from adipic acid.

It is respectfully submitted that the cited art of Kondoh and Morita I, whether viewed singly or in combination, fail to disclose or suggest all of the elements of the claims.

Kondoh generally describes a planetary speed changing device. Although Kondoh describes a planetary speed changing device it does not indicate that there is grease between externally toothed gears 51 and 52 and the internally toothed gear 8.

Morita II (and apparently Morita I, if Morita II is an accurate English translation of Morita I) generally describes a lubricating oil composition that is allegedly particularly suitable for automatic transmissions. Morita II begins with a lubricating base oil such as mineral oil and adds specific boron-containing ashless dispersant in an amount of 0.004 to 0.05 percent by mass in terms of boron, based on the total mass of the composition, an alkaline earth metal-based detergent with a base number of 0 to 500 mgKOH/g in an amount of 0.01 percent by mass or more in terms of alkaline earth metal, based on the total mass of the composition, and a sulfur-based additive in an amount of 0.01 to 0.3 percent by mass in terms of sulfur, based on the total mass of the composition.

Applicant respectfully submits that “grease” and “lubricating oil compositions” generally refer to different types of compositions within the art. Grease is a solid or semisolid lubricant obtained by blending base oil with thickener (as illustrated, for example, at paragraph 0022 of the present application). On the other hand, lubricating oil compositions are liquid lubricants, which do not contain the thickener. Accordingly, Applicant respectfully submits that the lubricating oil composition of Morita I does not correspond to the grease of the present invention.

Furthermore, Applicant submits that the grease as claimed in claim 1 is quite different from the lubricating oil compositions of Morita I and II. For example, the grease as claimed in claim 1 includes a thickener. The thickener is a component of the grease, and is what makes the grease solid or semisolid. The Morita I and II lubricating oil compositions do not contain any such thickener.

Morita I and II contain "boron-containing ashless dispersant," but such dispersant is used as an additive, and is not used as a thickener. See paragraph 0028 of the present application for further explanation.

Paragraph 0157 of Morita II indicates that the "lubricating oil" has a kinetic velocity of 4 to 30 mm²/s, and paragraph 0017 of Morita II indicates that the "base oil" has a kinetic velocity of 1 to 20 mm²/s. Applicants respectfully submit that the difference in kinetic velocities between the base oil and the lubricating oil is due to the addition of the "viscosity index improvers" (see paragraph 0139 of Morita II), not by the addition of boron-containing ashless dispersant. Viscosity index improvers of Morita II are not a lithium complex. Accordingly, Applicant respectfully submits that the grease as claimed in claim 1 is not obvious in view of the lubricating oil composition and viscosity index improvers of Morita I or II.

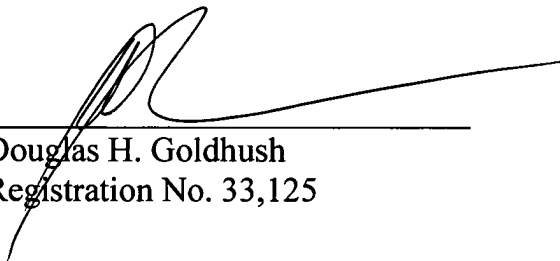
Dependent claims 2-3 and 5-6 depend from claims 1 and 4, respectfully, and are therefore patentable for at least the reasons that claims 1 and 4 are patentable. Applicant respectfully submits, therefore, that claims 2-3 and 5-6 contain subject matter that is neither disclosed nor suggested in the cited art.

For the reasons explained above, it is respectfully suggested that each of claims 1-6 recites subject matter that is neither disclosed nor suggested in the prior art of record. Accordingly, it is respectfully requested that all of claims 1-6 be allowed, and that this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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